In the claims:

Please amend the claims as follows:

1-80. (Canceled)

81-104. (Withdrawn)

105. (Currently Amended) A method of producing a preparation of high mannose glucocerebrosidase (hmGCB) comprising a carbohydrate chain having at least four mannose residues ~~preparation~~, comprising:

providing a mammalian cell that expresses ~~which is capable of expressing~~ a human glucocerebrosidase (GCB);

contacting the cell with kifunensine ~~such that the removal of at least one mannose residue distal to the pentasaccharide core of the precursor oligosaccharide of GCB is prevented~~;

allowing the cell to produce hmGCB; and

harvesting the hmGCB from the cell or its culture media, to thereby produce an hmGCB preparation.

106. (Previously Added) The method of claim 105, wherein removal of one or more α 1,2 mannose residue(s) distal to the pentasaccharide core is prevented.

107-108. (Canceled)

109. (Previously Added) The method of claim 105, wherein the kifunensine is present at a concentration between about 0.05 to 20.0 μg/ml.

110. (Previously Added) The method of claim 109, wherein the kifunensine is present at a concentration between about 0.1 to 2.0 μg/ml

111. (Previously Added) The method of claim 105, further comprising contacting the cell with a class 2 processing mannosidase inhibitor.

112. (Previously Added) The method of claim 111, wherein the class 2 processing mannosidase inhibitor is selected from the group consisting of: swainsonine, mannostatin, 6-deoxy DIM, 6-deoxy-6-fluoro-DIM and combinations thereof.

113. (Previously Added) The method of claim 111, wherein the class 2 processing mannosidase inhibitor is swainsonine.

114. (Previously Added) The method of claim 111, wherein the class 2 processing mannosidase inhibitor is present at a concentration between 0.05 to 20.0 μg/ml.

115. (Previously Added) The method of claim 105, wherein the hmGCB has at least one carbohydrate chain having five mannose residues.

116. (Previously Added) The method of claim 105, wherein the hmGCB has at least one carbohydrate chain having eight mannose residues.

117. (Previously Added) The method of claim 105, wherein the hmGCB has at least one carbohydrate chain having nine mannose residues.

118. (Previously Added) The method of claim 105, wherein the removal of one or more mannose residues distal to the pentasaccharide core is prevented on at least two carbohydrate chains of hmGCB.

119. (Previously Added) The method of claim 105, wherein at least 60% of the hmGCB of the preparation have one or more carbohydrate chains in which the removal of one or more mannose residues distal to the pentasaccharide core has been prevented.

120. (Previously Added) The method of claim 119, wherein the removal of three or more mannose residues distal to the pentasaccharide core has been prevented.

121. (Previously Added) The method of claim 105, wherein at least about 20% of the hmGCB of the preparation have one or more carbohydrate chains having at least eight mannose residues.

122. (Previously Added) The method of claim 121, wherein at least about 40% of the hmGCB of the preparation have one or more carbohydrate chains having at least eight mannose residues.

123. (Previously Added) The method of claim 122, wherein at least about 60% of the hmGCB of the preparation have one or more carbohydrate chains having at least eight mannose residues.

124. (Previously Added) The method of claim 105, wherein at least about 80% or more of the carbohydrate chains of the hmGCB preparation have six or more mannose residues.

125. (Currently Amended) The method of claim 105, wherein the cell is a human cell and is a knockout for ~~at least one~~ a class 2 processing mannosidase.

126. (Currently Amended) The method of claim 105, wherein the cell is a human cell and comprises a class 2 processing mannosidase antisense molecule.

127. (Previously Added) The method of claim 105, wherein the cell comprises an exogenous nucleic acid sequence comprising a GCB coding region.

128. (Previously Added) The method of claim 127, wherein the cell further comprises an exogenous regulatory sequence which functions to regulate expression of the GCB coding region.

129. (Previously Added) The method of claim 105, wherein the cell comprises an exogenous regulatory sequence which functions to regulate expression of an endogenous GCB coding sequence.

130. (Previously Added) The method of claim 105, wherein the cell is a primary cell.

131. (Previously Added) The method of claim 105, wherein the cell is a secondary cell.

132. (Canceled) The method of claim 105, wherein the cell is a mammalian cell

133. (Previously Added) The method of claim ~~132~~ 105, wherein the cell is a human cell.

134. (Previously Added) The method of claim 133, wherein the cell is a fibroblast or a myoblast.

135. (Previously Added) The method of claim 133, wherein the cell is an immortalized cell.

136. (Previously Added) The method of claim 134, wherein the cell is an HT-1080 cell.

137. (Previously Added) The method of claim 105, wherein the cell is contacted with kifunensine in culture media.

138. (Previously Added) The method of claim 137, wherein the hmGCB is obtained from the media in which the cell is cultured.

139. (Currently Amended) A method of producing a preparation of high mannose glucocerebrosidase (hmGCB) comprising a carbohydrate chain having at least four mannose residues, the method comprising:

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providing a human cell into which a nucleic acid sequence comprising an exogenous regulatory sequence has been introduced such that the regulatory sequence is operably linked to, and regulates the expression of, an endogenous GCB coding region;

contacting the cell with a class 1 mannosidase inhibitor such that ~~substance which prevents~~ the removal of at least one mannose residue distal to the pentasaccharide core of a precursor oligosaccharide of GCB is prevented; and

allowing the cell to produce hmGCB, to thereby produce an hmGCB preparation.

140. (Currently Amended) The method of claim 139, wherein the mannosidase inhibitor prevents the removal of one or more α 1,2 mannose residue(s) distal to the pentasaccharide core ~~is prevented~~.

141. (Currently Amended) The method of claim 139, wherein the mannosidase inhibitor prevents the removal of one α 1,3 mannose residue distal to the pentasaccharide core ~~is prevented~~.

142. (Currently Amended) The method of claim 139, wherein the mannosidase inhibitor prevents the removal of one α 1,6 mannose residue distal to the pentasaccharide core ~~is prevented~~.

143. (Canceled) The method of claim 139, wherein the substance is a class 1 processing mannosidase inhibitor.

144. (Previously Added) The method of claim 143, wherein the class 1 processing mannosidase inhibitor is kifunensine.

145. (Previously Added) The method of claim 144, wherein the kifunensine is present at a concentration between about 0.05 to 20.0 μg/ml.

146. (Previously Added) The method of claim 145, wherein the kifunensine is present at a concentration between about 0.1 to 2.0 μg/ml.

147. (Currently Amended) The method of claim ~~1~~, wherein the cell is further contacted with a class 2 mannosidase inhibitor ~~a 144, wherein a further comprising contacting the cell with a class 2 processing mannosidase inhibitor~~.

148. (Previously Added) The method of claim 147, wherein the class 2 processing mannosidase inhibitor is selected from the group consisting of: swainsonine, mannostatin, 6-deoxy DIM, 6-deoxy-6-fluoro-DIM and combinations thereof.

149. (Previously Added) The method of claim 147, wherein the class 2 processing mannosidase inhibitor is swainsonine.

150. (Previously Added) The method of claim 147, wherein the class 2 processing mannosidase inhibitor is present at a concentration between 0.05 to 20.0 μg/ml.

151. (Previously Added) The method of claim 139, wherein the cell is a knockout for ~~at least one~~ a class 2 processing mannosidase.

152. (Previously Added) The method of claim 139, wherein the cell comprises a class 2 processing mannosidase antisense molecule.

153. (Previously Added) The method of claim 139, wherein the hmGCB has at least one carbohydrate chain having six mannose residues of the precursor oligosaccharide.

154. (Previously Added) The method of claim 139, wherein the hmGCB has at least one carbohydrate chain having eight mannose residues of the precursor oligosaccharide.

155. (Previously Added) The method of claim 139, wherein the hmGCB has at least one carbohydrate chain having nine mannose residues of the precursor oligosaccharide.

156. (Currently Amended) The method of claim 139, wherein the mannosidase inhibitor ~~substance~~ prevents removal of at least three mannose residues distal to the pentasaccharide core of the precursor oligosaccharide of GCB.

157. (Currently Amended) The method of claim 139, wherein the mannosidase inhibitor prevents removal of one or more mannose residues distal to the pentasaccharide core ~~is prevented~~ on at least two of the carbohydrate chains of hmGCB.

158. (Previously Added) The method of claim 139, wherein at least 60% of the hmGCB of the preparation have one or more carbohydrate chains in which the removal of three or more mannose residues distal to the pentasaccharide core has been prevented.

159. (Previously Added) The method of claim 139, wherein at least 20% of the hmGCB of the preparation have one or more carbohydrate chains having at least eight mannose residues.

160. (Previously Added) The method of claim 159, wherein at least 40% of the hmGCB of the preparation have one or more carbohydrate chains having at least eight mannose residues.

161. (Previously Added) The method of claim 160, wherein at least 60% of the hmGCB of the preparation have one or more carbohydrate chains having at least eight mannose residues.

162. (Previously Added) The method of claim 139, wherein at least about 80% or more of the carbohydrate chains of the hmGCB preparation have six or more mannose residues.

163. (Previously Added) The method of claim 139, wherein the cell is a primary cell.

164. (Previously Added) The method of claim 139, wherein the cell is a secondary cell.

165. (Canceled) The method of claim 139, wherein the cell is a mammalian cell

166. (Currently Amended) The method of claim ~~165~~ 139, wherein the cell is a human cell.

167. (Previously Added) The method of claim 166, wherein the cell is a fibroblast or a myoblast.

168. (Previously Added) The method of claim 166, wherein the cell is an immortalized cell.

169. (Previously Added) The method of claim 168, wherein the cell is an HT-1080 cell.

170. (Previously Added) The method of claim 144, wherein the cell is contacted with kifunensine in culture media.

171. (Previously Added) The method of claim 170, wherein the hmGCB is obtained from the ~~media in which the cell is cultured~~.

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172. (New) The method of claim 105, wherein the cell is a Chinese hamster ovary (CHO) cell transfected with an exogenous nucleic acid sequence comprising a human GCB coding sequence.

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173. (New) The method of claim 105, wherein the cell is a COS cell transfected with an exogenous nucleic acid sequence comprising a human GCB coding sequence.